

10069470 00576

JC10 Rec'd PCT/PTO 25 FEB 2002

Form PTO-1390U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE (REV 10-95) TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 0702-020319
		U S APPLICATION NO (if known, see 37 CFR 1.5) 10/069470
INTERNATIONAL APPLICATION NO PCT/NL00/00576	INTERNATIONAL FILING DATE 18.08.00 (18 August 2000)	PRIORITY DATES CLAIMED 26.08.99 (26 August 1999)
TITLE OF INVENTION ISSUING COMPUTER, ADMISSION CONTROL SYSTEM AND METHOD FOR GRANTING ADMISSION TO AN EVENT		
APPLICANT(S) FOR DO/EO/US Johan P. EILANDER and Hendrikus M. SMIT		
<p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items And other information</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371 <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1). <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) <ol style="list-style-type: none"> <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau) <input checked="" type="checkbox"/> has been transmitted by the International Bureau <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US) <input type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)). <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau) <input type="checkbox"/> have been transmitted by the International Bureau <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired <input checked="" type="checkbox"/> have not been made and will not be made <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)) <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>Items 11. to 16. below concern document(s) or information included:</p> <ol style="list-style-type: none"> <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included <input checked="" type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment. <input type="checkbox"/> A substitute specification <input type="checkbox"/> A change of power of attorney and/or address letter <input checked="" type="checkbox"/> Other items or information <ol style="list-style-type: none"> WO 01/15089-Front Page, Specification, Claims and Drawings (21 pp.) International Search Report (3 pp.) 		

U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/069470		INTERNATIONAL APPLICATION NO PCT/NL00/00576		ATTORNEY'S DOCKET NUMBER 0702-020319	
17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)): Search Report has been prepared by the EPO or JPO..... \$890.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) \$710.00 No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2))..... \$740.00 Neither international preliminary examination fee (37 CFR 1.482) nor International search fee (37 CFR 1.445(a)(2)) paid to USPTO .. . \$1040.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) \$100.00				CALCULATIONS PTO USE ONLY	
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$ 890.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e))				\$ 130.00	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	21 - 20	1	X \$18.00	\$ 18.00	
Independent claims	3 - 3 =	0	X \$84.00	\$ 0.00	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$280.00	\$ 0.00	
TOTAL OF ABOVE CALCULATIONS =				\$ 1038.00	
Reduction of 1/2 for filing by small entity, if applicable				\$ 0.00	
SUBTOTAL =				\$ 1038.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)) +				\$ 0.00	
TOTAL NATIONAL FEE =				\$ 1038.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) \$40.00 per property +				\$ 0.00	
TOTAL FEES ENCLOSED =				\$ 1038.00	
				Amount to be: Refunded	\$
				Charged	\$
a. <input checked="" type="checkbox"/> A check in the amount of \$ 1038.00 to cover the above fees is enclosed b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees A duplicate copy of this sheet is enclosed. c. <input checked="" type="checkbox"/> The Assistant Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>23-0650</u> A duplicate copy of this sheet is enclosed NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status. SEND ALL CORRESPONDENCE TO Richard L. Byrne 700 Koppers Building 436 Seventh Avenue Pittsburgh, Pennsylvania 15219-1818 Telephone: (412) 471-8815 Facsimile: (412) 471-4094					
				SIGNATURE <u>Richard L. Byrne</u>	
				NAME <u>28,498</u>	
				REGISTRATION NUMBER	

10/069470

JC19 Rec'd PCT/PTO 25 FEB 2002

PATENT APPLICATION/PCT
Attorney Docket No. 702-020319

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :
Johan P. EILANDER :
Hendrikus M. SMIT :
International Application :
No. PCT/NL00/00576 :
International Filing Date :
18 August 2000 :
Priority Date Claimed :
26 August 1999 :
Serial No. Not Yet Assigned :
Filed Concurrently Herewith :

Pittsburgh, Pennsylvania
February 25, 2002

PRELIMINARY AMENDMENT

Box PCT
Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to initial examination, please amend the above-identified patent application as follows:

IN THE SPECIFICATION:

On page 1, after the title, please insert the following section headings:

BACKGROUND OF THE INVENTION

1. Field of the Invention

Before the paragraph beginning at page 1, line 14, please insert the following section heading:

2. Description of the Related Art

Before the paragraph beginning at page 2, line 14, please insert the following section heading:

SUMMARY OF THE INVENTION

Before the paragraph beginning at page 5, line 24, please insert the following section heading:

BRIEF DESCRIPTION OF THE DRAWINGS

Before the paragraph beginning at page 6, line 7, please insert the following section heading:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

IN THE CLAIMS:

Please cancel pending claims 1-22 and rewrite them as new claims 23-43 as follows:

23. A method for granting admission to an event, wherein an admission code is issued to a consumer via a distribution channel, which admission code is in accordance with a predetermined format and which forms part of a set of admission codes, which set of admission codes forms a predetermined random or pseudo-random subset of all codes having the predetermined format, wherein it is checked at the entrance to the event whether a code presented by a consumer is part of the set of admission codes.

24. The method according to claim 23, wherein the code is placed on a carrier after receipt by the consumer.

25. The method according to claim 24, wherein said code is placed on said carrier by means of a printer.

26. The method according to claim 23, wherein said code comprises a bar code.

27. The method according to claim 23, wherein said distribution channel comprises the Internet.

28. The method according to claim 23, wherein the event is part of the set consisting of a sports event, a concert, a day in an amusement park, a cinema show, a theatre show, a fair, a symposium, a boat trip, a rail journey, a bus journey or a flight.

29. The method according to claim 23, wherein an entrance gate is unlocked or locked in dependence on the result of the check.

30. The method according to claim 23, wherein the presented code is input into the admission computer at the entrance to the event by means of an input apparatus.

31. The method according to claim 30, wherein said input apparatus is an optical scanner.

32. The method according to claim 23, wherein the check at the entrance is carried out by the admission computer, which carries out a logic operation on the presented code, the result of which logic operation is compared with a predetermined set of results stored in the memory of the computer.

33. The method according to claim 32, wherein said result comprises an identification of an entrance gate and/or an admission date and/or an admission time segment and/or a seat number and/or a serial number.

34. The method according to claim 32, wherein the issuing computer processes can selectively carry out the comparison between the result and the set of predetermined results on part of the result.

35. The method according to claim 32, wherein said routine for the logic operation is changed periodically.

36. The method according to claim 32, wherein the admission code is determined upon being issued by an issuing computer by retrieving a result from said predetermined set of results and to subject said result to the inverse of the logic operation that will be used at the moment of admission.

37. The method according to claim 36, wherein the issuing computer processes a result into an admission code only once.

38. The method according to claim 23, wherein at least one characteristic part of the presented admission code and/or the associated result, for example, the serial number, is stored in a memory of the admission computer, and said admission code is then excluded from admission.

39. An admission control system for granting admission to an event, comprising an admission computer, which includes means for checking whether an input code is part of a set of admission codes, which set of admission codes forms a predetermined random or pseudo-random subset of all codes having a predetermined format.

40. The admission control system according to claim 39, wherein said admission computer includes means which are capable of carrying out a logic operation on the input code, and of comparing the result thereof with a predetermined set of results stored in the memory of the computer.

41. The admission control system according to claim 39, furthermore comprising at least one entrance gate, which can be unlocked or locked in dependence on the result of the check.

42. An issuing computer intended for granting admission to an event, including means that verify whether the admission code is in accordance with a predetermined format and forms an element of a set of admission codes, which set of

admission codes forms a predetermined random or pseudo-random subset of all codes having said predetermined format.

43. The issuing computer according to claim 42, furthermore including means which are capable of determining the admission code by retrieving a result from a predetermined set of results and to subject said result to the inverse of the logic operation that can be used at the moment of admission by an admission control system admission code according to claim 40.

IN THE ABSTRACT:

After the claims, please insert a page containing the Abstract Of The Disclosure, which is attached hereto as a separately typed page.

REMARKS

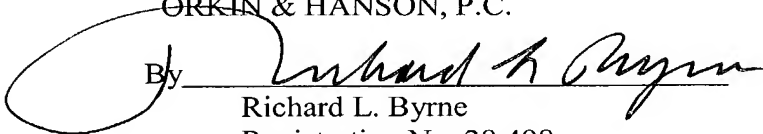
The specification and claim amendments have been made in order to conform this patent application to customary United States patent practice.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attachment is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Examination and allowance of pending claims 23-43 are respectfully requested.

Respectfully submitted,

WEBB ZIESENHEIM LOGSDON
ORKIN & HANSON, P.C.

By 

Richard L. Byrne
Registration No. 28,498
Attorney for Applicants
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219-1818
Telephone: 412-471-8815
Facsimile: 412-471-4094

ISSUING COMPUTER, ADMISSION CONTROL SYSTEM AND METHOD FOR GRANTING ADMISSION TO AN EVENT

ABSTRACT OF THE DISCLOSURE

A method for granting admission to an event, wherein an admission code is issued to a consumer via a distribution channel, which admission code is in accordance with a predetermined format and which forms part of a set of admission codes, which set of admission codes forms a predetermined random or pseudo-random subset of all codes having the predetermined format, wherein it is checked at the entrance to the event whether a code presented by a consumer is part of the set of admission codes.

4/PRTS

10/069470
10069470
JC19 Rec'd PCT/PTO 25 FEB 2002

ISSUING COMPUTER, ADMISSION CONTROL SYSTEM AND METHOD
FOR GRANTING ADMISSION TO AN EVENT

- The present invention relates to a method for granting admission to an event, wherein an admission code is issued to a consumer via a distribution channel, which admission code has a predetermined format and which forms part of a set of admission codes. A code having a predetermined format may for example be a number or an alphanumeric sequence comprising a predetermined number of positions. It is noted that in this connection the term event is understood to refer to a trip as well.
- A method of this kind is known, for example in connection with the granting of admission to aeroplanes as used, among others, by the British airline EasyJet Airlines Company. A consumer can thereby order a ticket via the Internet and pay with a credit card, for example, whereby an admission code consisting of for example 6 alphanumeric characters is transmitted, likewise via the Internet, which code can be printed out by the consumer on his printer. The passenger must show this admission code at the gate to the aeroplane, where this code is compared with the list of codes that have been issued. If the code being presented is included in the list and the name on the passenger's passport moreover corresponds with the name on the list, the passenger is granted admission to the aeroplane.
- The drawback of this prior art method is the fact that a current and complete list of all admission codes that have been given out must be available at the gate to the aeroplane, which makes it necessary either to have an on-line connection with the issuing computer at the gate to the aeroplane or to stop the issuing admission codes well in advance and transmit the admission codes that have been granted to the memory of the computer that is present at the gate to the aeroplane. Moreover, the risk

of fraud resulting from the fact that a series of consecutive admission codes is issued is so large that a laborious additional check, such as passport control, is necessary when such a method is used. A method of this kind is furthermore not very suitable for events where it is not customary to present an identity card at the entrance.

The object of the invention is to provide an inexpensive, quick, simple and efficient method of granting admission to an event, wherein the risk of fraud is minimized and additional checks are not necessary.

15 According to the inventive method, the set of admission
codes is to that end made up of a predetermined random
or pseudo-random subset of all codes having the
predetermined format, wherein it is checked at the
entrance to the event and/or the journey whether a code
20 presented by a consumer is part of the set of admission
codes. According to the invention, said set of admission
codes need not represent the actually issued admission
codes, but the entire set may comprise predetermined
admission codes, irrespective of the fact whether they
25 have actually been issued or not.

If the subset of admission codes is sufficiently small in comparison with the complete set of all codes having the prescribed format, and it is at the same time ensured that the set of admission codes does not constitute an obvious sequence (in other words, a random or pseudo-random sequence), the risk of someone conceiving and presenting a code that is part of the set of admission codes is very small, viz. in the order of the proportion between the number of elements of the subset and the complete set. It is simple, therefore, to make this proportion very small by giving the admission

code a format of for example 20 alphanumeric characters, which, given a maximum number of admission codes of for example 100,000, gives more than 10^{31} possible codes, and to ensure that the set of admission codes constitutes a
5 maximally random subset of the complete set.

Preferably, the code is placed on a carrier, preferably by means of a printer, after receipt by the consumer. Preferably the code comprises a bar code, which
10 represents for example the aforesaid alphanumeric sequence. Preferably, the distribution channel is the Internet. The above preferred embodiments ensure that the issuing of codes takes place in a consumer-friendly, simple and quick manner, which codes can subsequently be
15 subjected to a check in a simple manner.

The invention is especially advantageous if the event is a sports event, a concert, a day in an amusement park, a cinema show, a theatre show, a fair, a symposium, a boat
20 trip, a rail journey, a bus journey or a flight.

Preferably, an entrance gate is unlocked or locked in dependence on the result of the check. This can take place automatically, for example, if the entrance gate
25 is connected to an admission computer that does the checking.

At the entrance to the event the presented code is preferably input into the admission computer by means of
30 an input apparatus, preferably an optical scanner, which admission computer carries out the check at the entrance by subjecting the presented code to a logic operation, the result of which is compared with a predetermined set of results that is stored in the memory of the admission
35 computer.

The advantage of this method, wherein it is not the

codes themselves that are checked but rather the results of an operation carried out thereon, for example one or more known cryptologic operations, is that the results themselves may constitute a consecutive, non-random sequence, which may include all kinds of information about the event, preferably an identification of an entrance gate where the consumer must present the code, an admission date, an admission time segment, a seat number and/or a serial number. The admission computer can thereby selectively carry out the comparison between the result and the set of predetermined results on part of the result, so that for example the check with regard to the entrance gate number or the date and/or the time can be omitted as desired if there are special circumstances.

Preferably the routine for the logic operation is changed periodically. This discourages possible frauds from deriving the routine for the logic operation by means of protracted analysis of the issued admission codes.

Preferably, the admission code is determined upon being issued by an issuing computer by retrieving a result from said predetermined set of results and to subject the result to the inverse of the logic operation that will be used at the moment of admission, wherein the issuing computer preferably processes a result into an admission code only once.

As already said before, the set of results may be a consecutive sequence, for example consisting of an entrance gate number, a date, a period and a serial number. By subjecting, at the issuing moment, the admission code to the inverse of the operation that will be carried out on the admission code at the respective entrance gate number, on the specific date, in the

specific period, the correct admission code that will grant admission to the event under those conditions will be obtained. In that case the only data that need to be programmed into the admission computer in advance in order to enable the check are the entrance gate number, the date, the period and the operation routine, and not the (issued) serial numbers, therefore.

Preferably, in order to prevent the same admission code being used a second time, at least one characteristic part of the presented admission code and/or the associated result, for example the serial number, is stored in a memory of the admission computer, and said admission code is then excluded from admission.

The invention also relates to an admission control system and to an issuing computer for implementing the method according to the invention.

The invention furthermore relates to a carrier on which an admission code has been placed by means of the method according to the invention.

The invention will now be explained in more detail with respect to the figures, which show an exemplary embodiment of the invention, merely for the purpose of illustration.

Figure 1 is a schematic representation of the Internet, to which an issuing computer and a home computer are connected;

Figure 2 is a schematic representation of a subset of admission codes;

Figure 3 is a schematic representation of another subset of admission codes;

Figure 4 is a schematic representation of a logic operation, to which a subset of codes is subjected; and

Figure 5 is a schematic representation of an admission control system.

Figure 1 schematically shows a computer network, the Internet in this case, to which a server is permanently connected, which server functions as an issuing computer
10 2 for admission codes by means of which admission to one or more events can be obtained. When a consumer wishes to visit one of said events, he can contact the Internet 1 via his home computer by means of a modem, and input the Internet address (URL) of the server in question
15 into his browser. His computer screen will then display a web page on which the various events are being offered.

The consumer can state his selection and also indicate
20 certain preferences, such as the number of persons, the date, the time, the circle, etc. Then the total sum of the transaction will be displayed, which can subsequently be paid by the consumer, for example by means of a credit card or a coupon system, whereby a
25 protected transmission procedure is used.

Once this has been done, the transaction is completed in that an admission code is sent to the consumer's home computer 3 by the issuing computer 2, which admission
30 code, in this embodiment in the form of a bar code representing an alphanumeric sequence of twenty characters, is displayed on the screen. The sending of the admission code likewise takes place in a protected manner. Optionally, if the consumer states an e-mail
35 address, the admission code is also transmitted by protected e-mail, so that the admission code will not be lost in the unhoped-for event that the web page should

prematurely disappear from the screen.

Then the consumer can print out the admission code, in the form of a bar code, on his own printer 4, whereby it is also possible to print additional information, such as the date, the starting time and the end time of the period during which the consumer must check in, a possible number of the entrance gate at which he must check in, as well as a possible seat number, as a result of which an admission ticket comprising a unique admission code is created, as it were. If several admission codes have been purchased simultaneously for different events, or for several persons, these codes can be printed in a corresponding manner.

15

Now the procedure used for issuing the admission codes will be explained with reference to Figures 2, 3 and 4. As already discussed before, an admission code as used in the present embodiment consists of 20 alphanumeric characters. Sets 10, 20 represent all possible codes that consist of 20 alphanumeric characters, the so-called format that is prescribed for a code. Subsets 11, 21 represent the set of admission codes that can be issued for a specific event, and thus also determine the maximum number of consumers that can visit the event.

25

With the prior art method of issuing admission codes via the Internet as described in the introduction, the admission codes constitute a continuous, non-random subset 11 of a complete set 10, for example in that the code is incremented by one with each new code that is to be issued. It is quite simple thereby to predict a next admission code once one or a few admission codes are known. When such a method is used, it is therefore necessary to check at the entrance whether the admission code in question has in actual fact been issued, and also to check by means of an identity card whether the correct person is checking in with said admission code, in order to prevent a forger being granted admission with an admission code that has

been issued to someone else. Consequently, a current list of actually issued admission codes and the associated names of consumers needs to be available at the entrance to the event.

The need for the above-described laborious additional protection can be obviated, as schematically shown in Figure 3, by making sure that it is not possible to predict an admission code on the basis of one or more other admission codes, in other words, that the admission codes are determined in a random or semi-random fashion, and furthermore ensuring that the subset of admission codes 21 is so small in comparison with the complete set 20 that the risk that a code that has been selected at random is an admission code is very small. With a format of 20 alphanumeric characters (36 possible characters for each position, A .. Z, 0 .. 9) the complete set 10, 20 consists of 1.34×10^{31} codes, so that, given a maximum number of visitors of 100,000, the chance of a potential forger finding the correct admission code by a chance is only 1 : 1.34×10^{31} per attempt.

20

Referring to Figure 4, a specific procedure is used for determining a pseudo-random subset of admission codes 21. The starting point is a subset of "results" 31. The term results will be explained hereafter. In the embodiment said results 31 are composed of an entrance gate number, an admission date, an admission time segment, a serial number and four filter codes. Overall said result comprises 15 characters. Results 31 constitute a non-random subset 31 of a complete set 30. Upon issue of the admission codes as described with reference to Figure 1, a first result is retrieved from the memory of issuing computer 2 and at the same time blocked for a next issue.

Then the result is converted into a pseudo-random admission code, as indicated by the arrows in Figure 4, by means of a logic operation, which consists of various steps in accordance with a specific routine, which depends on the entrance

gate/admission date/admission time segment combination. The operation routine may comprise a well-known technique from the field of cryptology.

In the embodiment, the operation routine successively comprises the changing of positions of characters (for example the first character to the third position, the second character to the eleventh position, the third character to the second position, etc.), and the substitution of characters (for example A for Y, B for Z, C for 1, D for 2, etc.). The first two filter codes must be used thereby in order to determine which changing step and which substitution step are to be used. Then an alphanumerical check number consisting of five characters is determined from the obtained code, with which the original result is extended to a total of twenty characters. Following that, another changing step and another substitution step are carried out, which are determined by the third and fourth filter codes. Since there are four filter codes, 36^4 (over 1.4 million) different operation routines are possible, which provides adequate protection against the system being hacked.

Thus a pseudo-random admission code is obtained, which is transmitted to the consumer's home computer via the Internet and which can be printed out by the consumer.

25

Pseudo-random means that statistically the subset of admission codes 21, which is obtained by subjecting all elements of subset 31 to the logic operation, is hardly distinguishable, if at all, from a truly random subset, in spite of being derived from a non-random set.

The consumer subsequently checks in with his printed code at the indicated entrance gate in the indicated time segment. Figure 5 shows an admission control system, which consists of an admission computer 40, which is connected to a number of entrance gates 41. Stored in the memory of admission computer 40 is an associated operation routine for every entrance

gate/admission date/admission time segment combination that is possible. Consequently, there is no need for the admission codes themselves or the actually issued admission codes or the original serial numbers that form the basis thereof to be stored in the memory.

The operation routine that is used is the inverse of the operation routine that has been used by the computer when issuing admission codes for this entrance gate/admission date/admission time segment combination.

The consumer holds his code, which is printed in the form of a bar code, before an optical scanner 42, as a result of which the code is read into the memory of admission computer 40. Then the code that has been read is subjected to the operation routine, which is valid for the entrance gate in question at that point in time. Since this operation routine is the inverse of the operation routine by means of which the original result was converted into an admission code by the issuing computer, it follows that the computer will convert the presented code into a "result" consisting of, among other things, an entrance gate number, an admission date and an admission time segment.

If the above three data tally with the facts that apply at that moment, it is established that the code being presented is an admission code, and the consumer is granted admission. The check as regards the gate number, for example, can be selectively deactivated, for example when an entrance gate is defective and it is necessary to use an entrance gate other than the originally intended one. The serial number, which is also included in the result, is stored in the memory of the admission computer after the check has been carried out, thus making it possible to check whether admission has been granted on the basis of an admission code before already. This makes it possible to prevent two people being granted admission on the basis of an admission code they have copied from each other. By including this protection message in the transmission and

having it printed out upon issue of the admission code, the copying of admission codes is discouraged, and the consumer is warned not to show his code to strangers lest it be copied.

Once it has been established that a presented code is an admission code and admission has not been granted before, a barrier 43 connected to the admission computer 40, for example a turnstile, is unlocked, thus granting the consumer admission to the event.

CLAIMS

1. A method for granting admission to an event, wherein an admission code is issued to a consumer via a distribution
5 channel, which admission code is in accordance with a predetermined format and which forms part of a set of admission codes, which set of admission codes forms a predetermined random or pseudo-random subset of all codes having the predetermined format, wherein it is checked at
10 the entrance to the event whether a code presented by a consumer is part of the set of admission codes.
2. A method according to claim 1, wherein the code is placed on a carrier after receipt by the consumer.
- 15 3. A method according to claim 2, wherein said code is placed on said carrier by means of a printer.
4. A method according to claim 1, 2 or 3, wherein said code
20 comprises a bar code.
5. A method according to any one of the preceding claims, wherein said distribution channel comprises the Internet.
- 25 A method according to any one of the preceding claims, wherein the event is part of the set consisting of a sports event, a concert, a day in an amusement park, a cinema show, a theatre show, a fair, a symposium, a boat trip, a rail journey, a bus journey or a flight.
- 30 7. A method according to any one of the preceding claims, wherein an entrance gate is unlocked or locked in dependence on the result of the check.
- 35 A method according to any one of the preceding claims, wherein the presented code is input into the admission computer at the entrance to the event by means of an input

apparatus.

9. A method according to claim 8, wherein said input
apparatus is an optical scanner.
- 5
10. A method according to any one of the preceding claims,
wherein the check at the entrance is carried out by the
admission computer, which carries out a logic operation on
the presented code, the result of which logic operation is
10 compared with a predetermined set of results stored in the
memory of the computer.
11. A method according to claim 10, wherein said result
comprises an identification of an entrance gate and/or an
15 admission date and/or an admission time segment and/or a
seat number and/or a serial number.
12. A method according to claim 10 or 11, wherein the issuing
computer processes can selectively carry out the
20 comparison between the result and the set of predetermined
results on part of the result.
13. A method according to claim 10, 11 or 12, wherein said
routine for the logic operation is changed periodically.
- 25
14. A method according to any one of the claims 10 - 13,
wherein the admission code is determined upon being issued
by an issuing computer by retrieving a result from said
predetermined set of results and to subject said result to
30 the inverse of the logic operation that will be used at
the moment of admission.
15. A method according to claim 14, wherein the issuing
computer processes a result into an admission code only
35 once.
16. A method according to any one of the preceding claims,

wherein at least one characteristic part of the presented admission code and/or the associated result, for example the serial number, is stored in a memory of the admission computer, and said admission code is then excluded from admission.

17. An admission control system for implementing the method according to any one of the preceding claims, comprising an admission computer, which includes means for checking whether an input code is part of a set of admission codes, which set of admission codes forms a predetermined random or pseudo-random subset of all codes having a predetermined format.

18. An admission control system according to claim 17, wherein said admission computer includes means which are capable of carrying out a logic operation on the input code, and of comparing the result thereof with a predetermined set of results stored in the memory of the computer.

19. An admission control system according to claim 17 or 18, furthermore comprising at least one entrance gate, which can be unlocked or locked in dependence on the result of the check.

20. An issuing computer intended for implementing the method according to any one of the claims 1 - 16, including means that verify whether the admission code is in accordance with a predetermined format and forms an element of a set of admission codes, which set of admission codes forms a predetermined random or pseudo-random subset of all codes having said predetermined format.

21. An issuing computer according to claim 20, furthermore including means which are capable of determining the admission code by retrieving a result from a predetermined set of results and to subject said result to the inverse

of the logic operation that can be used at the moment of admission by an admission control system admission code cording to claim 18 or 19.

22. A carrier on which an admission code has been placed in accordance with the method according to any one of the claims 1 - 16.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 March 2001 (01.03.2001)

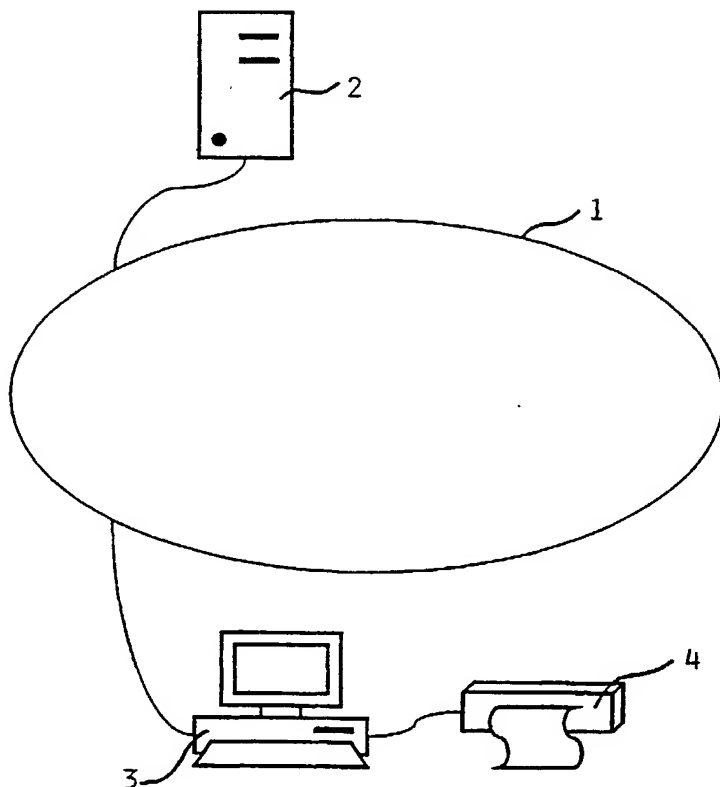
PCT

(10) International Publication Number
WO 01/15089 A1

- (51) International Patent Classification⁷: **G07B 15/00**, G07C 11/00, G07B 1/02, G06F 17/60
- (21) International Application Number: PCT/NL00/00576
- (22) International Filing Date: 18 August 2000 (18.08.2000)
- (25) Filing Language: Dutch
- (26) Publication Language: English
- (30) Priority Data:
1012914 26 August 1999 (26.08.1999) NL
- (71) Applicant (for all designated States except US): **TICKET DIRECT B.V.** [NL/NL]; Burg. Stramanweg 104, NL-1101 AA Amsterdam (NL).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **EILANDER, Johan, Peter** [NL/NL]; Boeierstraat 44, NL-1435 LL Rijsenhout (NL). **SMIT, Hendrikus, Martinus** [NL/NL]; Korenmolen 78, NL-1622 JD Hoorn (NL).
- (74) Agent: **HOOIVELD, Arjen, Jan, Winfried**; Sweelinckplein 1, NL-2517 GK The Hague (NL).
- (81) Designated States (national): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian

[Continued on next page]

(54) Title: ISSUING COMPUTER, ADMISSION CONTROL SYSTEM AND METHOD FOR GRANTING ADMISSION TO AN EVENT



(57) Abstract: A method for granting admission to an event, wherein an admission code is issued to a consumer via a distribution channel, which admission code is in accordance with a predetermined format and which forms part of a set of admission codes, which set of admission codes forms a predetermined random or pseudo-random subset of all codes having the predetermined format, wherein it is checked at the entrance to the event whether a code presented by a consumer is part of the set of admission codes.

WO 01/15089 A1

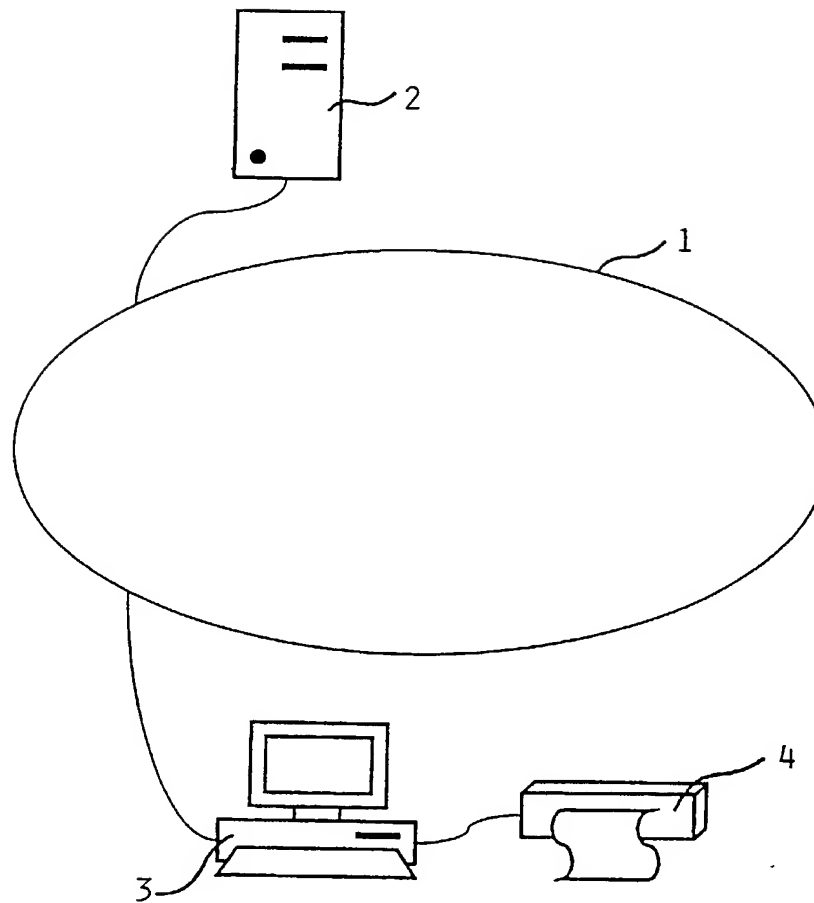


FIG. 1

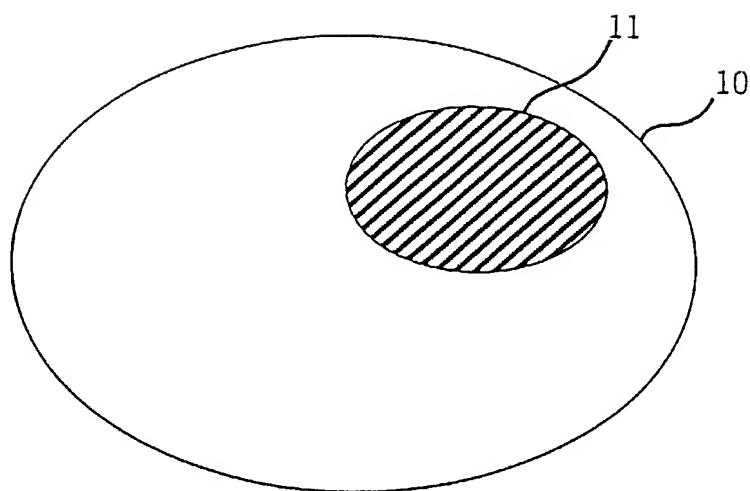


FIG. 2

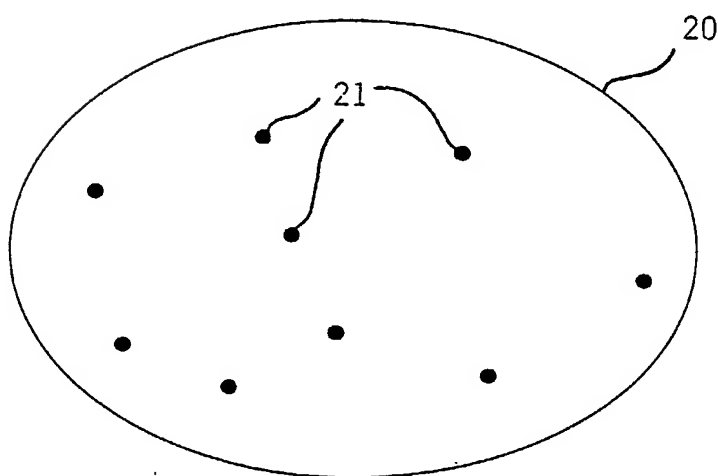


FIG. 3

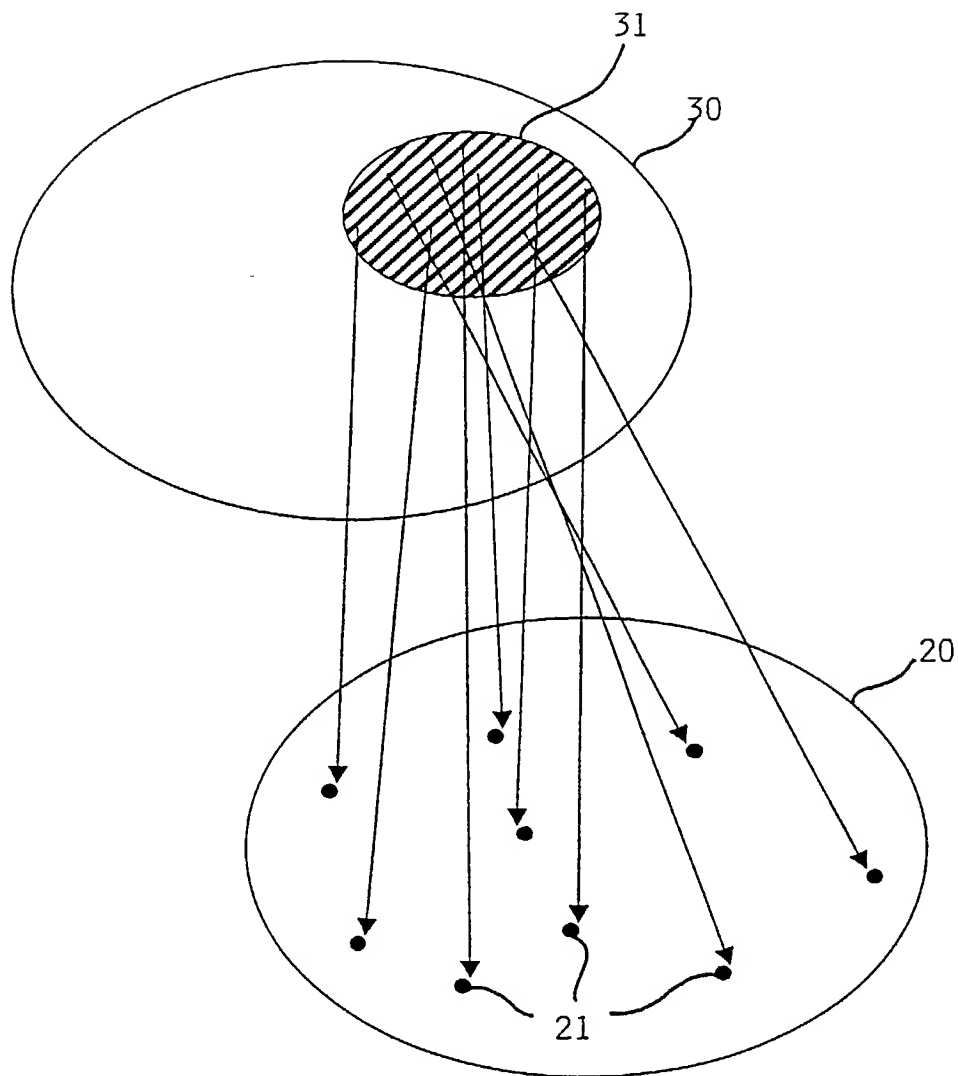


FIG. 4

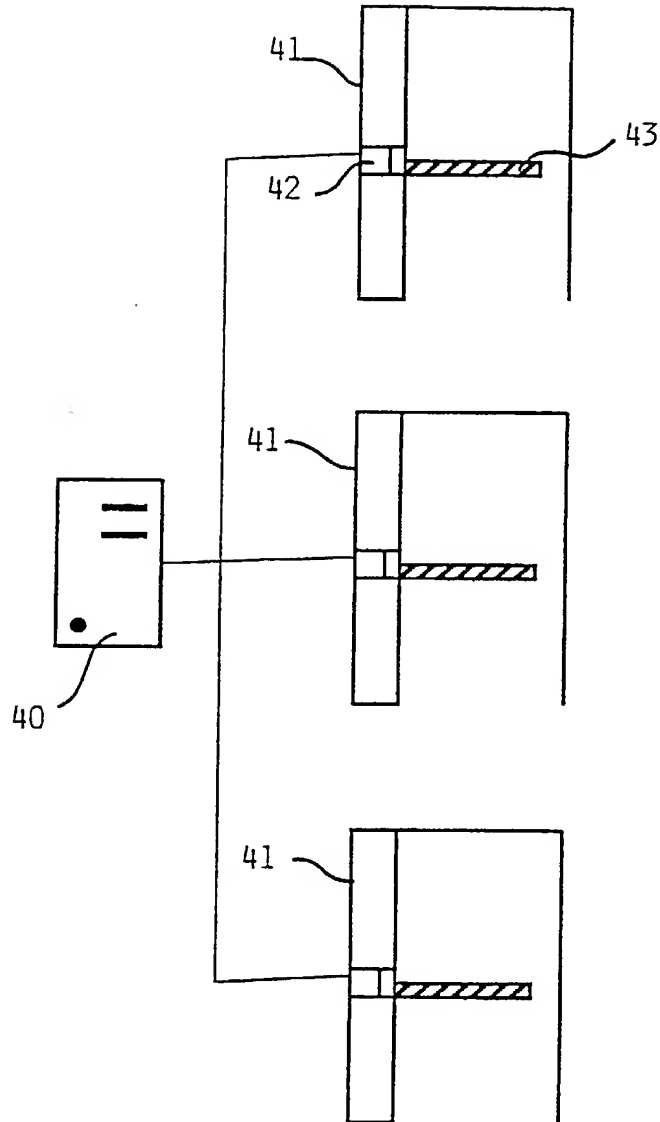


FIG. 5

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Issuing computer, admission control system and method for granting admission to an event,
the specification of which

(check one)

- ☐ is attached hereto.
- ☐ was filed on _____ as
Application Serial No.
and was amended on _____
(if applicable)
- ☐ was filed as PCT international application
No. PCT/NL00/00576 on 18 August 2000
and was amended under PCT Article 19 on _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
<u>1012914</u>	<u>NL</u>	<u>26/08/1999</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
_____	_____	_____	<input type="checkbox"/>	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.) (Filing Date) (Status)
(patented, pending, abandoned)

(Application Serial No.) (Filing Date) (Status)
(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

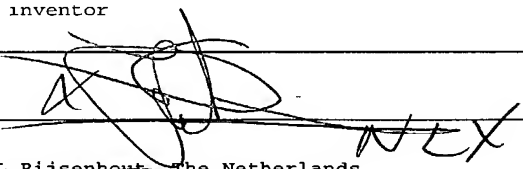
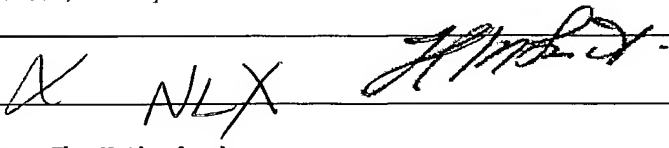
POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

William H. Logsdon	22,132	Paul M. Reznick	33,059	Kent E. Baldauf, Jr.	36,082
Russell D. Orkin	25,363	John W. McIlvaine	34,219	Christian E. Schuster	43,908
David C. Hanson	23,024	Blynn L. Shideler	35,034	Thomas J. Clinton	40,561
Frederick B. Ziesenheim	19,438	Julie W. Meder	36,216	Dean E. Geibel	42,570
Richard L. Byrne	28,498	Lester N. Fortney	38,141	Nathan J. Prepelka	43,016
Kent E. Baldauf	25,826	Randall A. Notzen	36,882	Kirk M. Miles	37,891
Barbara E. Johnson	31,198	James G. Porcelli	33,757	Jessica M. Sosenko	47,102
				Gary F. Matz	45,504

Send Correspondence to:

Richard L. Byrne, 700 Koppers Building, 436 Seventh Avenue, Pittsburgh PA 15219-1818

Direct Telephone calls to: (name and telephone number) Richard L. Byrne (412) 471-8815

Full name of sole or first inventor <u>Eilander, Johan Pater</u>	
Inventor's signature 	Date <u>1-03-2002</u>
Residence Boeierstraat 44, NL-1435 LL <u>Rijsenhout</u> , The Netherlands	
Citizenship The Netherlands	
Post Office Address Boeierstraat 44, NL-1435 LL <u>Rijsenhout</u> , The Netherlands	
Full name of second joint inventor, if any <u>Smit, Hendrikus Martinus</u>	
Second inventor's signature 	Date <u>1-3-2002</u>
Residence Korenmolen 78, NL-1622 JD <u>Hoorn</u> , The Netherlands	
Citizenship The Netherlands	
Post Office Address Korenmolen 78, NL-1622 JD <u>Hoorn</u> , The Netherlands	

(Supply similar information and signature for third and subsequent joint inventors.)

